Adolescent Pregnancy In Utah

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Executive Summary

Adolescent pregnancy is a persistent health and social problem in Utah that has serious consequences at the individual, family, and community levels. Pregnancy during the teen years poses health problems for mothers and their infants. Teen pregnancy increases a family's chances of living in poverty (especially compared with married adults who start families after age 20), and results in high social costs for health care and public assistance. Teen pregnancy may result in: induced abortions, inadequate prenatal care, repeat births before age 20, proportionally higher rates of low birth weight infants and infant mortality, subsequent infant illnesses and/or disabilities, low educational attainment and low marriage rates.

Risks

- Studies conducted in other states have found that 60% of pregnant teens were molested, raped or were victims of an attempted rape before they became pregnant.
- Utah studies show that adolescents who earn "C" or lower school grades, who smoke tobacco, drink alcohol or get high on drugs, and who date steadily are more likely to be sexually active.

Sexual Activity

- One-third of Utah high school students reported that they were non-virgins in 1988.
- Regional and national data from 1993 show that about one-half of high school students are non-virgins and over 33% regularly engage in sex.
- Rates of some sexually transmitted diseases (STDs) have more than doubled in the Utah teen population (both sexes) between 1988 and 1992.

Prevention

- Utah's public school-based adolescent pregnancy prevention programs stress sexual abstinence.
 There is no known published evidence regarding the effectiveness of these curricula in preventing teen pregnancy in Utah. National studies suggest that abstinence-based curricula may delay the initiation of sexual activity among teens who are at low risk of becoming pregnant. These programs have not been shown to be effective in preventing pregnancy among high-risk adolescents.
- The evidence shows that family planning services are being used more frequently by teens.
- 13,700 Utah teens received contraceptive services, family planning information, and instruction on the prevention of sexually transmitted diseases
- · Utah has 11 abstinence programs, funded by a federal grant

Fathers

• Fathers in cases of teen pregnancy are generally not themselves teens. Infants' fathers were 20 years of age or older for 42% of births to mothers ages 15-17 and 72% of fathers were 20 years of age or older for births to mothers ages 18-19 between 1995 and 1997.

• A recent study found that most sexually active women have a partner no more than 2 years older. However, for those with a partner 6 or more years older, the teen pregnancy rate was almost 4 times higher.

Prenatal Care

- In 1997, As many as 37% of pregnant teens made nine or fewer visits with their prenatal health care
 provider before delivery, probably because many entered prenatal care late or delivered their infants
 early.
- Over half of Utah pregnant teens entered prenatal care in the first trimester during 1997. However, Utah teens continue to have more unhealthy outcomes than older mothers.

Birth Rates

- Teen births in Utah account for approximately 11% of all births in the state. In 1997, adolescents ages 15-19 gave birth to over four thousand (4,494) infants. Well over a thousand (1,439) of these children were born to adolescents 17-15 years of age. The 1997 birth rate for teens, ages 15-19, was 44.9 per 1,000 females in this age group. This birth rate has remained fairly stable since the early 1980s.
- The rate of teen births for all races in Utah is slightly lower than the United States rate, however, white teen birth rates are similar. Ninety-three percent (93%) of teens who gave birth in 1997 in Utah were white. African American, Native American and Hispanic origin adolescents had higher reported teen pregnancy rates.
- Teen birth rates in both Utah and the United States are four to five times higher than the rates for many Western European nations.

Outcomes

- Adolescents in Utah are more likely to deliver a low birth weight infant and face infant mortality than women who wait until at least age twenty to become mothers.
- Twenty years ago, in Utah, most teen births were to married couples. Today, over half of births to women ages 15-19 occur outside of marriage, a figure reflecting national trends.
- Teens are less likely to place infants for adoption today. In the 60's, 20% of infants born to teen mothers were placed for adoption. Today. About 4% of Utah teens and 3% of U.S. teens place their infants for adoption.
- Utah teens are less likely than teens nationwide to abort their pregnancies.
- Teens who do marry are more likely to divorce than women and men who marry when they are older.
- In 1997, about one of every five (22%) of Utah white teen mothers 18-19 years of age gave birth to a second child before turning 20 years of age between 1995 and 1997. This percent is even higher among older teens of some Utah minority groups such as Native Americans (32%) and African-Americans (27%).
- Teen pregnancy can be an obstacle to an adolescent striving to complete her education. Between 1995 and 1997, fewer teens having their first child (55%) completed high school by age 20 compared with 87% of women who had their first child after age 20.

Costs

- In Utah during 1997, public government funding (Medicaid) paid the newborn delivery charges for 41% of the births to women ages 18-19.
- In addition, Medicaid paid the hospital bill for 38% of the deliveries to women ages 15-17.
- Overall, Medicaid funds pay the hospital delivery costs for about 18% of infants born to Utah residents of all ages.

Conclusion

Utah's teen birth rate has been relatively stable since 1984. It is slightly lower than the U.S. teen birth rate. Low SES and ethnically diverse populations are over represented in Utah's teen pregnancy rates. Utah's teen mothers suffer more poor outcomes than older mothers, such as low birth weight births and infant mortality. In addition, children of teen mothers are more likely to encounter other health risks than children of older mothers. Examples of these risks include, exposure to environmental tobacco smoke, infrequent seatbelt use.

Trends in Live Birth Rates

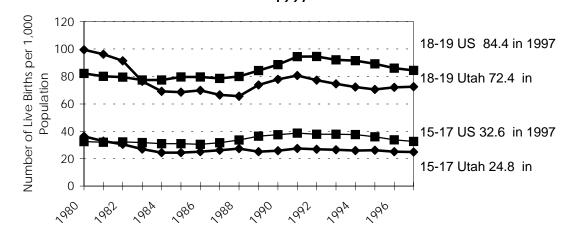
Over the past 20 years, there has been a larger change in live birth rates for women in Utah 18-19 years of age than among women 15-17 years of age in Utah. In the early 1980s, Utah teens started experiencing lower birth rates than rates recorded for teens nationally, see Figure 1.

- Birth rates for females 15-17 years of age have remained stable with about 25 to 27 teens giving birth for every 1,000 in the population since 1983 in Utah.¹
- For Utah women 18-19 years of age:
- Birth rates stabilized in the mid 1980s with about 66 to 69 live births for every 1,000 population. ¹
- Older teens' birth rate started rising again in 1988. The teen birth rate peaked in 1991 at 80.6 births per 1,000 teens, and has since declined to the 1997 rate of 72.4. ¹
- Figure 1.A. shows birth rates for Utah and U.S. women age 15-19 for the years 1980-1997.

Figure 1

Since 1984, the teen birth rate in Utah has been approximately 45 births per 1,000 teen women. This is slightly lower than the teen birth rate for the U.S. population. ^{1,2}

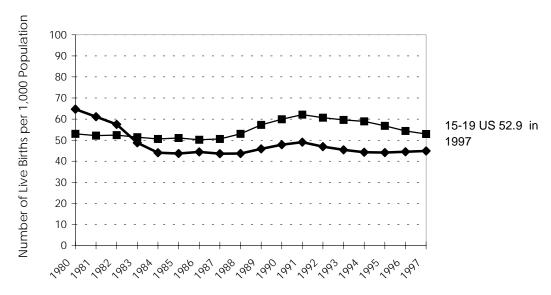
Birth Rates for Females of All Races 15-17 and 18-19
Years of Age Utah and the United States (USA) 19801997



Utah Dept. of Health, Bureau of Vital Records. CDC "Births: Final Data National Vital Statistics Reports Vol. 47. No18. April 29, 1999.

Figure 1.A.

Birth Rates for Females of All Races 15-19 Years of Age. Utah and the United States (USA), 1980-1997.



Utah Dept. of Health, Bureau of Vital Records. CDC "Births: Final Data National Vital Statistics Reports Vol. 47. No18. April 29, 1999.

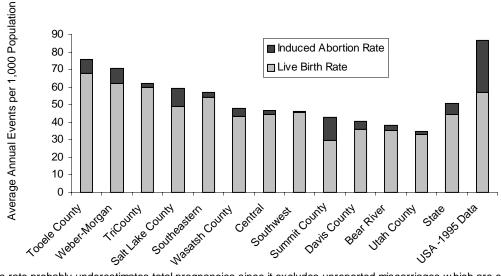
Pregnancies

The reported pregnancy rate includes live births and abortions. This rate is probably an underestimate of the actual pregnancy rate because it excludes unreported miscarriages, which are estimated to be 20% of live births and 10% of abortions. Over time, reported teen pregnancies, both those ending in abortion and live birth, have decreased in Utah.

- The rate of reported pregnancies for females 15-19 years of age (per 1,000 population) declined 35% between 1980 and 1994. The 1997 reported pregnancy rate was 44.9 (per 1,000 females age 15-19).
- Tooele County, Weber-Morgan, and Tricounty Local Health Districts (LHDs) led the state in the reported pregnancy rate from 1995-1997, see Figure 2.
- A 1986 Utah study showed that adolescents who become pregnant are four times more likely to smoke than teens in the general population.³
- Socioeconomic status tends to have an impact on pregnancy and abortion rates: 83% of adolescents that give birth are from poor and low-income situations; and 85% of adolescents that give birth and become unwed parents are also from poor and low-income situations.⁴
- Higher income teens comprise 62% of all women ages 15-19, yet represent only 17% of adolescents who give birth.⁴

Figure 2

Rate of Reported Pregnancies* for Females 15-19 Years of Age by Local Health District and State. Utah, 1995-1997
3-Year Average and United States of America (USA), 1995.



^{*} This rate probably underestimates total pregnancies since it excludes unreported miscarriages which are estimated as 20% of live births and 10% of abortions.

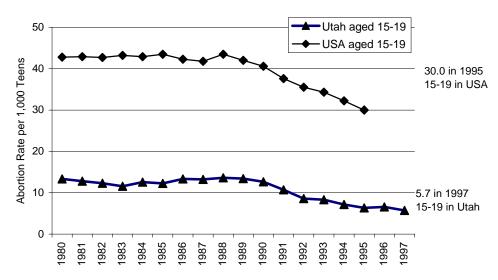
Induced Abortions

Utah teens tend to have difficulty accessing abortion services since state law requires parental notification. Teens tend to wait to have their pregnancy diagnosed, thus delaying the timing of abortion. Abortion is a safer procedure when performed early in pregnancy.

- Since 1989, abortion rates have declined among Utah women 15-19 years of age.¹
- In Utah between 1995 and 1997, teens aborted 12% of pregnancies while women 20-44 years of age aborted only 5% of pregnancies. ¹
- From 1995-1997, the following Utah Health Districts had the highest percentages of teen pregnancies resulting in induced abortion: 13% of teen pregnancies in Summit; 10% in Salt Lake; 9% in Weber-Morgan; and 8% in Tooele local health districts. ¹
- During the years 1995-1997, among pregnant teens 15-19 years of age, African-Americans (8.2%) were less likely to undergo abortions than Whites (11.5%) or Other Races (12.3%).¹
- In 1997, 34% of Utahns ages 18-19 who had abortions reported no contraception use during the year before conception, while 38% of Utahns ages 15-17 reported not using contraception prior to having an abortion. In 1994, 37% of Utahns age 18-19 and 47% Utahns ages 15-17 who had abortions reported no contraceptive use. ¹
- Nationally, few formal evaluations have been done to assess counselings effect on teen's choices regarding abortion.⁵

Abortion Rates for Females 15-19 Years of Age. United States (USA) and Utah, 1980-1997.

Figure 3



Utah Dept. of Health, Bureau of Vital Records. The Alan Guttmacher Institute, Special Report 1998, "U.S. Teenage Pregnancy Statistics".

Live Births

In Utah the population of women ages 15-19 has increased 42% from 1980 to 1997, yet the rate of live births declined 31%, from 65.3 to 44.9 live births for every 1,000 teens in this age group. In 1997, 10.5% of Utah infants were born to mothers under 20 years of age. ⁶

State Data:

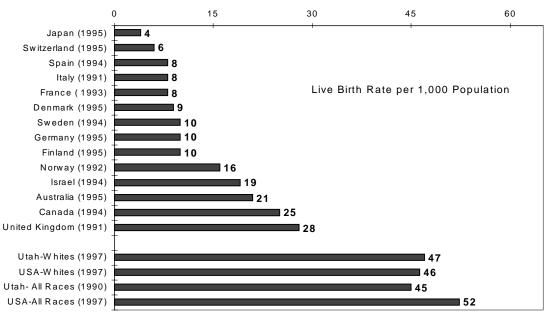
- White Utah teens accounted for 93% of live births to females under age 20 in 1997 ⁶
- Adolescent members of some racial and ethnic minority groups showed substantially higher live birth rates when compared with non-Hispanic white teens in Utah^{6,7} See figures 5 and 6.
- The 1997 birth rate for White Utah teens was 47/1,000 adolescent females. This is higher than the birth rate for U.S. White teens, 46/1,000 adolescent females. 2,6,7

National data:

- The birth rate of U.S. teens, age 15-19, declined 15% from 1991 to 1997²
- Although 72% of teen births occurred outside of marriage in 1997, unmarried teen births accounted for only 31% of all nonmarital births²

Figure 4

Live Birth Rate of Females 15-19 Years of Age per 1,000 Population: Selected Countries, United States of America (USA), and State of Utah

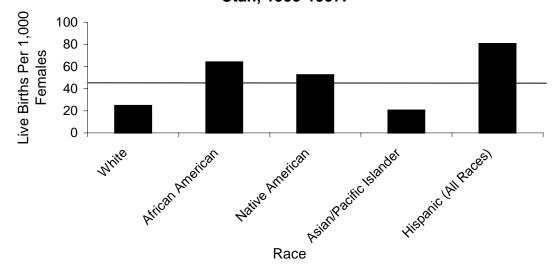


KIDS Count Special Report. When Teens Have Sex; issues and Trends. The Annie E. Casey Foundation: Baltimore, 1998. U.S. Census Bureau. Estimates of the Population of States by Age, Sex, Race, and Hispanic Origin: 1990-1998. Utah Department of Health. MatCHIIM Database. Available: http://hlunix.hl.state.ut.us/matchiim/main/

Figure 5

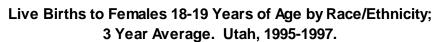
Live Births to Females 15-17 Years of Age by Race/Ethnicity; 3-Year Average.

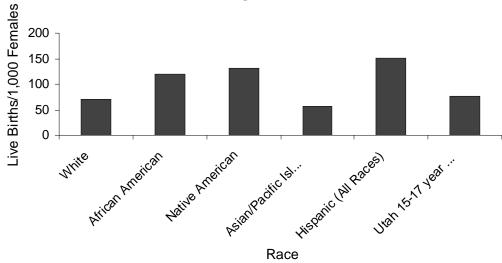
Utah, 1995-1997.



Utah Department of Health. MatCHIIM Database. Available: http://hlunix.hl.state.ut.us/matchiim/main/; U.S. Census Bureau. State Population Estimates. Available: http://www.census.gov/population/www/estimates/statepop.html

Figure 6





Utah Department of Health. MatCHIIM Database. Available: http://hlunix.hl.state.ut.us/matchiim/main/; U.S. Census Bureau. State Population Estimates. Available: http://www.census.gov/population/www/estimates/statepop.html

Ages of Infants' Fathers

National and state data indicate that many teen women are engaging in sexual activity with adult men who are more than three years older. Other statistics indicate that some teen sexual activity may be unwanted by the young women involved.

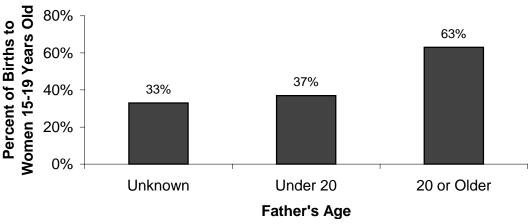
In Utah between 1995 and 1997, birth certificates for adolescent births demonstrated the following:

- Among Utah mothers less than 15 years of age, only 29% identified fathers' ages. Older teens, 18-19 years of age, identified the father over three-quarters (77%) of the time¹
- About one-third (33%) of Utah teen birth's reported little or no information about the father¹
- Utah teen mothers averaged 18 years of age. Fathers of the same infants averaged 21 years of age¹
- Infants' fathers were 20 years of age or older for 42% of births to mothers ages 15-17, and 72% of births to mothers ages 18-19¹
- Data from other states as well as national figures show that this age gap between fathers and adolescent mothers is not uncommon⁷
- A recent study found that the majority (64%) of sexually active women age 15-17 had a primary partner who was no more than 2 years older. However, for those women age 15-17 with a partner 6 or more years older, the pregnancy rate was 3.7 times as high as the rate for women whose partner was no more than 2 years older. In addition, women with a partner closer to their own age were more likely to use contraception.⁸

Figure 7

Fathers' Ages for Infants Born to 15-19 Year Old Women.

Utah, 1995-1997.



Utah Department of Health. Bureau of Vital Records.

Prenatal Care

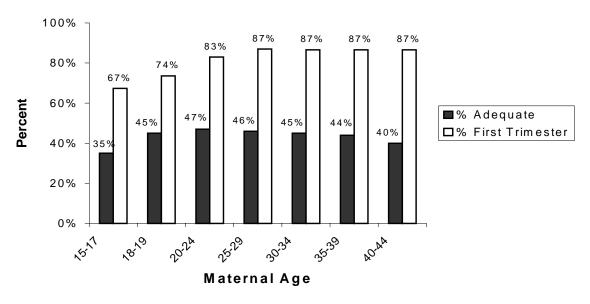
Prenatal care has long been recognized as an important contributor to ensuring healthy outcomes for mother and infant. Prenatal care should consist of early and ongoing risk assessment to identify and intervene with factors that may have an impact on pregnancy outcomes. Areas in which prenatal care may be beneficial in detecting risks early include sexually transmitted diseases, diabetes, hypertension, slow fetal growth, high-risk health behaviors such as alcohol, tobacco, and other drug use, and early labor. Assessment of the adequacy of prenatal care includes the timing of entry into prenatal care, the number of visits prior to delivery, and the length of the pregnancy.

For 1997 births to Utah residents:

- Sixty-seven percent (67%) of females 15-17 years of age entered care in the first three months of pregnancy. This percentage compares to 85% or more of all expectant mothers 20 years and older in Utah. ⁶
- As many as 36% of pregnant teens made eight or fewer visits with their prenatal health care provider before delivery, probably because many entered prenatal care late or delivered their infants early. 6

Figure 8





Adequate Prenatal care is based on the Kotelchuck amendment to the Kessner Index. Utah Department of Health. MatCHIIM Database. Available: http://hlunix.hl.state.ut.us/matchiim/main/

Low Birth Weight

Pregnancy in the teen years poses health risks for the teen mother and her infant. Teen mothers are less likely to receive adequate prenatal care, less likely to gain adequate weight during pregnancy, and more likely to experience anemia and pregnancy-induced hypertension than older pregnant women. Complications during labor and delivery, such as fetal distress, are more commonly reported among teen mothers. Additionally, infants born to teen mothers are at greater risk for low birth weight, preterm delivery, and other complications of the perinatal period. Low weight at birth (infants born weighing less than 2,500 grams or about 5.5 pounds) is related to poor infant health, such as respiratory distress, newborn anemia, neurological problems, and even death.

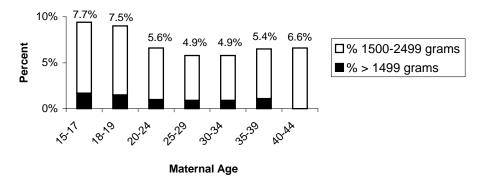
According to a study of Utah teen births, younger mothers in Utah, ages 13-17, had an increased risk of poor pregnancy outcomes (premature delivery before 37 weeks gestation, low birth weight, or an infant who was small for gestational age) compared with mothers ages 20-24. These poorer outcomes for teens were unrelated to non-health variables such as educational attainment and marriage.¹⁰

In Utah for 1995-1997 live births:

- Mothers, ages 18-19 had a 45% higher rate of low birth weight (2,500 grams/ 5.5 pounds) infants than the rate born to mothers 20 and older.⁴
- Mothers, ages 15-17 had a 53% higher rate of low birth weight infants than mothers 20 and older. 4
- Mothers under 18 years of age gave birth to very low birth weight infants, weighing less than 1,500 grams (3.3 pounds), nearly twice as often as mothers 20 and older. 4
- In 1997, the average cost hospital charge was 6 to 85 times higher for low birth weight infants. 11

Figure 9

Percent of Infants Born Low Birth Weight by
Maternal Age. Utah, 1995-1997.



Utah Department of Health. MatCHIIM Database. Available: http://hlunix.hl.state.ut.us/matchiim/main/

Health Problems for Children Born to Teen Mothers

Children from families with parents who were better educated, earned more money, and had a mother older than 20 at her first delivery, had better health (as reported by their parents). The 1988 National Health

Interview Survey on Child Health also found that growing up with two continuously married parents had clear advantages for children's overall health status.¹²

Figure 10 shows some health differences for children born to teen mothers compared with children born to women first bearing children at age 20 or older.

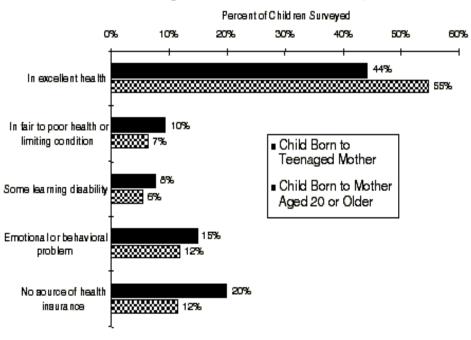
This 1988 national health interview survey found:

- Children born to adolescent mothers are more likely to encounter additional health risks than children born to older mothers. Children of teen mothers are more likely to
- Live with a smoker (56% versus 38%)
- rarely or never be restrained with seatbelts or child seats (41% versus 25%)
- have late or irregular bedtimes (21% versus 16%) as compared to those children born to a mother who is at least 20 years of age. 12

be hospitalized for short stays than those children born to older mothers. 12

Figure 10

Selected Health Characteristics of Children Born to Teenage Mothers Versus Children Born to Mothers Aged 20 or Older at First Birth. US, 1988.



Infant Mortality

Infant mortality is often used as an indicator of the health of a population. Utah's infant mortality rate has ranked as one of the lowest among U.S. states for infant mortality for a number of years. However, there are sub-populations in Utah at higher risk for infant mortality, including adolescent mothers.

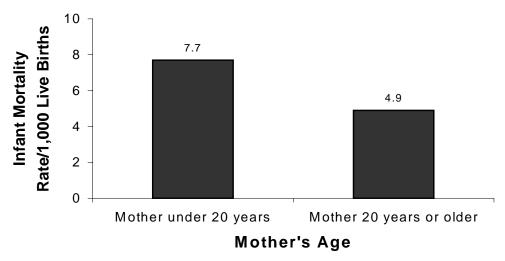
In Utah, between 1995 and 1997:

Infants born to mothers under 19 years of age were 1.8 times more likely to have their infant die than older mothers.¹³

- Utah teens' infants died more frequently from Sudden Infant Death Syndrome (SIDS) than infants born to older mothers. ¹³
- Mortality was higher among infants born to mothers age 20 or older who were Hispanic, or a member of another racial or ethnic group other than White. This trend was not observed in teen mothers, however, probably due to the small number of members of these groups.¹³

Figure 11

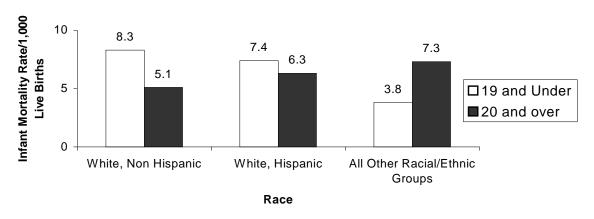
Infant Mortality Rate by Mothers Age. Utah 1995-1997.



Utah Dept. of Health, Bureau of Vital Records, Utah Births and Deaths Certificates Database.

Figure 12





Note: Ethnic and racial groups for teens contain very small numbers. Results should be interpreted with caution.

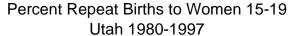
Repeat Births

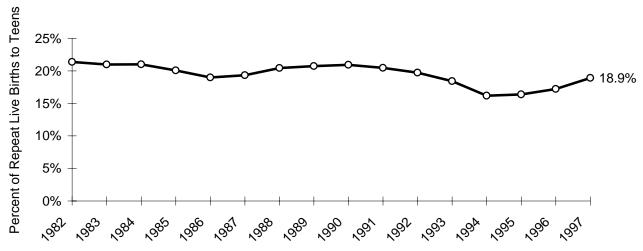
Teens that have once been pregnant are at great risk of having another pregnancy during their adolescent years. These mothers may incur compounded physical and psychological risks with more than one pregnancy during their teen years. A 1993 Census Bureau study found that women receiving Aid To Families With Dependent Children (AFDC) had 2.6 children on average compared with 2.1 children for non-AFDC mothers. The AFDC families had more children even though the mothers were younger, 30 years versus 34 years for non-AFDC mothers, on average. 14

- Between 1995 and 1997 in Utah, about 18% of births to teens 15-19 years of age were to adolescents who had already given birth to one or more previous live born infants.
- 21% of African-American Utah teens and 28% of American Indian Utah teens giving birth between 1995 and 1997 were delivering a second, third, or later child, compared with 17% of Utah's white teen mothers.⁶
- National data show that 29% of mothers getting AFDC in 1993 had their first birth before age 18 compared with only 15% of non-AFDC mothers.¹⁴

Of several well-designed and evaluated programs with a purpose of delaying subsequent teen pregnancy, few have had an impact.¹⁵

Figure 13

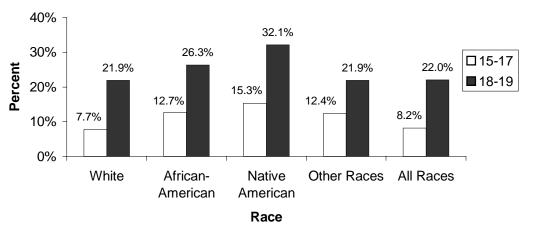




Utah Department of Health. MatCHIIM Database. Available: http://hlunix.hl.state.ut.us/matchiim/main/

Figure 14

Percent of Second or Later Births by Mother's Age and Race. Utah, 1995-1997



Utah Department of Health. MatCHIIM Database. Available: http://hlunix.hl.state.ut.us/matchiim/main/

Marriage

In both Utah and the United States as whole, births to unmarried women have become a larger proportion of births to women of all ages. In 1960, 1.5% of Utah births and 5.3% of U.S. births were to unmarried females of all ages. Pay 1997, 16.6% of Utah births and 32.4% of U.S. births occurred outside marriage for women of all ages. This trend may result in a lack of support systems for these women, which may pose a greater risk for poor pregnancy outcomes.

- Among females, ages 15-17 who gave birth in Utah during 1997, 77% were not married; among 18-19 year olds, 52% were unmarried.⁶
- Marriages for adolescent females are more common in Utah than nationally. In 1997, 20% of Utah marriages involved a bride under 20 years of age (1990 versus just 11% of marriages nationally).¹
- According to the 1990 census, 15.7% of Utah families were headed by a single parent. These single
 parent families with children under 18 years of age in Utah ranged from 22% of families in Grand
 County to 7% of families in Rich and Wayne Counties.¹⁶
- In Utah in 1997, 47% of divorces occurred before five years of marriage; 71% ended within ten years.¹

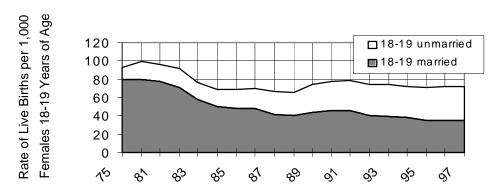
National data show:

- In the United States in 1990, 32% of divorces occurred before five years of marriage; 63% ended within ten years.¹⁷
- Almost one-third of all women regardless of current or previous marital status living with their own children under 21 years of age whose father was absent lived beneath the federal poverty limit. 16
- Young women raised in a family with both biological parents consistently have a lower probability of having a non-marital teen birth. 18, 19, 20, 21
- Females are more likely to have a non-marital teen birth if their own mothers first gave birth as teens or received welfare during the daughter's adolescent years. 18, 19, 22, 23
- Males raised by a single mother are more likely to father a child during their teen years according to a 1993 report.²⁴

On average, there are seven years for women and ten years for men between first sexual intercourse and first marriage.²⁵

Figure 15

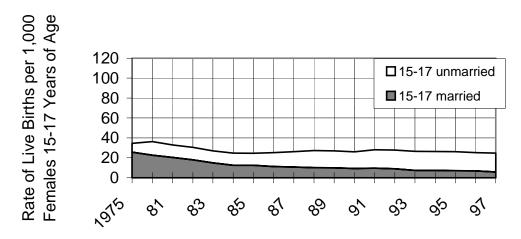
Live Births per 1,000 Population for Females 18-19 Years of Age by Marriage Status. Utah 1975-1997.



Utah Department of Health. Bureau of Vital Records. Utah Department of Health. MatCHIIM Database. Available: http://hlunix.hl.state.ut.us/matchiim/main/

Figure 16

Live Births per 1,000 Population for Females 15-17 Years of Age by Marriage Status. Utah 1975-1997.



Utah Department of Health. Bureau of Vital Records. Utah Department of Health. MatCHIIM Database. Available: http://hlunix.hl.state.ut.us/matchiim/main/

Adoption

Adoption among unmarried pregnant women has been declining since the late 1960s in the United States.²⁵ Although little data on adoption exits, adolescent women are more likely to place their newborns for adoption than older unmarried women.²⁶

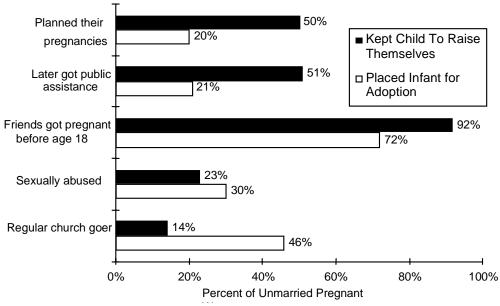
- In 1986, 2.8% of U.S. infants and 11.6% of Utah infants were relinquished for adoption by their unmarried parents.²⁷
- In 1997, about 3.6% (1,565) of Utah birth certificates were amended to reflect adoptions. These Utah adoptions include step-parent adoptions but probably exclude private adoption by biological parents of all ages.¹

National data show:

- From 1965 to 1972 nationally, about 20% of infants born to single white mothers were placed for adoption. This adoption placement of white infants dropped to 3% between 1982 and 1988. Black women have chosen adoption less often than whites during these decades.^{28, 29}
- A 1992 evaluation of 29 Adolescent Family Life (AFL) care projects which emphasized encouraging teens to place their infants for adoption found an 11% relinquishment rate compared with a 2% national relinquishment rate. Half of teens who intended to place their child for adoption later changed their minds.²⁹

Figure 17

Selected Characteristics of Unmarried Women Who Choose to: Keep Their Infants to Raise Themselves OR Place Their Child for Adoption



The Encyclopedia of Adoption, Facts on File Inc, New York 1991.

Educational Attainment

One of the major concerns often expressed about pregnancy during the teenage years is the potential impact on educational attainment for the adolescent mother. Education attainment data from Utah birth certificates among females who gave birth between 1995 and 1997 were reviewed. Women who delay childbirth until age 20 had a greater likelihood of completing high school than women who had given birth during younger teen years.¹

In Utah:

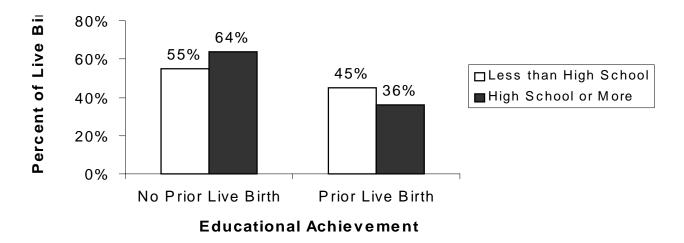
- Between 1995 and 1997, 45% of adolescents who gave birth at least twice before age 20 had not completed high school.¹
- Of women who delayed having their first child until age 20 or older, 87% achieved at least a high school education, while only 55% of those who had their first child before age 20 achieved this level of education.¹
- A June 1995 report showed that school failure often predicts early sexual intercourse and teen parenthood. 21, 30, 31

Nationally, a 1993 Census Bureau survey found:

- Only 57% of AFDC mothers had earned their high school diplomas.³²
- Among AFDC mothers in 1993, 19% had attended college for at least one year.³²
- Approximately one in seven AFDC mothers enrolled in school during 1993, and only 11% were teens.¹⁴

Figure 18

Educational Achievements of Women under 20 Who
Gave Birth Between 1995-1997 in Utah



Utah Department of Health. Bureau of Vital Records.

Births by County

Some rural and urban counties have relatively high birth rates for high school-age females compared with other counties.⁶

- Statewide, the 1995-1997 three-year average birth rate for females 15-19 years of age was 44.5 live births for every 1,000 females in this age group. ⁶
- Tooele primarily an urban county had the highest birth rate for women 15-19 years old during 1995-1997. 6
- San Juan (62.3) and Duchesne (62.4) rural counties ranked second and third in the state for live birth rates for females 15-19 years of age. ⁶
- Rich (11.4) and Morgan (15.9) counties had the lowest birth rates for females 15-19 years of age in the 1995-97 average. ⁶

Table 1
Birth Rate to Utah Women Age 15-19 by County, Utah, 1995-1997

County B	Sirth Rate to Women Age 15-19	County	Birth Rate toWomen Age 15-19
Beaver	45.7	Piute	44.2
Box Elder	41.3	Rich	11.4
Cache	33.0	Salt Lake	48.8
Carbon	50.7	San Juan	62.3
Daggett	35.4	Sanpete	36.2
Davis	35.8	Sevier	57.7
Duchesne	62.4	Summit	29.5
Emery	50.6	Tooele	67.6
Garfield	43.5	Uintah	58.8
Grand	55.7	Utah	32.8
Iron	38.9	Wasatch	43.3
Juab	57.7	Washington	51.3
Kane	28.3	Wayne	37.2
Millard	39.1	Weber	64.4
Morgan	15.9	Total State Ra	ate 44.5

Utah Department of Health. Bureau of Vital Records.

Poverty

The financial responsibilities that accompany raising children increases the burden of becoming a teen parent. At present, there are publicly-funded programs designed to assist families with children living at or near the poverty level. In 1995, a program known as Aid to Families with Dependent Children (AFDC) was available to help needy families. This program has since been renamed Temporary Assistance to Needy Families (TANF). There are other programs for which adolescent parents may qualify.

In Utah during 1995:

Teen mothers living on their own comprised about one percent of all AFDC cases.³²

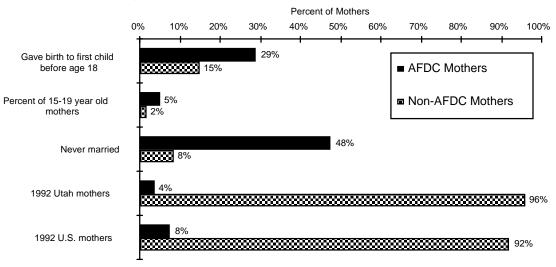
- In 1995, 1,409 children receiving AFDC money were living with a grandparent. Some of these children may be offspring of teen mothers.³²
- In October 1995, 42% of 7,566 AFDC clients required to participate in either Utah's Realizing Independence through Successful Employment (RISE) or Single Parent Employment Demonstration (SPED) programs, first gave birth to a child as a teen.³²
- Of all families receiving AFDC payments, 80% had no additional earned or unearned income and received an average monthly grant of \$385.34.³²

National AFDC data demonstrate that:

- In 1975, 54% of total AFDC expenditures went to households headed by women who first became mothers before age 20. By 1990, 51% was consumed by these households.¹⁴
- Thirty-two percent (32%) of poor women of all ages living with children under age 21 with an absent father received no child support from the absent father.¹⁴
- Of "never married" mothers who were awarded child support by court order, only 27% actually received some form of child support from the biological father.¹⁴

Figure 19

Selected Characteristics of Mothers Receiving Aid to Families with Dependent Children (AFDC) Money and Non-AFDC Mothers. US, Summer 1993.



Summer 1993 Bureau of the Census, Survey of Income and Program Participation (SIPP).

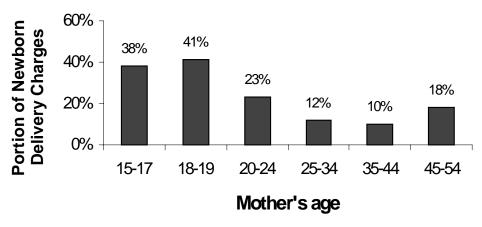
Medicaid Costs for Live Births to Adolescents

Some teens' prenatal care, labor and delivery costs are covered through their parent's private health insurance. Often, however, the infant's (newborn grandchild) medical costs are not eligible for coverage under the same private health care plan.

- In 1997, approximately 530 (38%) newborn deliveries to females 15-17 years of age and approximately 1208 (41%) deliveries to females 18-19 years of age were paid, in whole or in part, though the Medicaid Program. Overall, Medicaid funds pay the hospital delivery costs for about 18% of infants born to Utah residents of all ages.¹¹
- Newborn charges are not identified in hospital discharge data by age of mother. Newborn charges in 1997 hospital discharges averaged \$3,197.23 for all hospital births. ¹¹ Average hospital costs in 1997 for newborns born to mothers of all ages in Utah depended on the infant's birth weight and health:
- Normal newborns averaged \$865¹¹
- Premature infants with major problems averaged \$17,99411
- Premature infants or infants with respiratory distress averaged \$65,907¹¹
- Hospital costs in 1997 for maternity conditions for all vaginal deliveries averaged \$2,629. ¹¹ These charges do not include physician fees. ¹¹
- Hospital costs in 1997 for Cesarean-section deliveries averaged \$5,431. These charges do not include physician fees.¹¹
- Nationally, every dollar spent on publicly subsidized family planning services saves \$3.00 in medical costs associated with pregnancy and birth.³²

Figure 20

Percent of Hospital Newborn Deliveries with Medicaid funding, by Mother's Age. Utah, 1997

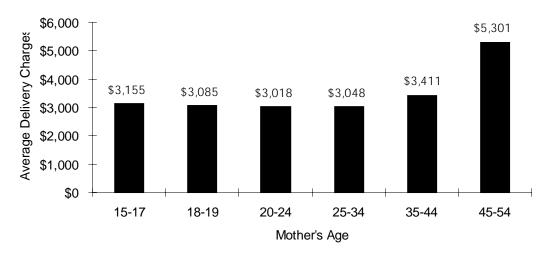


Utah Department of Health. Office of Health Data Analysis. Hospital Discharge Database. Available: http://hlunix.hl.state.ut.us/hda/hi_iq/hi_iq.html?

Figure 21

Average Hospital Delivery Charges, by Mother's Age.

Utah, 1997.



 $\label{thm:policy} \begin{tabular}{ll} Utah Department of Health. Office of Health Data Analysis. Hospital Discharge Database. Available: $$http://hlunix.hl.state.ut.us/hda/hi_iq/hi_iq.html?$ \end{tabular}$

Sexual Activity

A 1991-1993 longitudinal study of 473 Utah youth found that sexual maturity or pubertal development (early or late) related to teens' sexual behaviors. Hormones and biological markers associated with puberty influenced males more than females in this Utah study.³³

A spring 1988 survey of 839 Utah high school students found:

- One third (33%) of 10th, 11th, and 12th grade students had experienced sexual intercourse and 17% had been sexually active during the past month.
- Utah students were more likely to be sexually active if they:
- were currently dating steadily (40% sexually active)
- reported that premarital sex was not against their own values (39%)
- had been drunk or high on drugs (31%)
- · did not attend church regularly or at all (32%)
- had a "C" or lower high school grade average (29%)³⁴

NOTE: This Utah survey may under represent students from more conservative families; 33% of parents did not allow their teenage children to participate.³⁴

Since Utah, Idaho, and Colorado exclude questions related to teens' sexual behavior, data from Wyoming, Montana and Nevada Youth Risk Behavior Surveillance Surveys may reflect teens' behavior throughout the intermountain region, including the State of Utah.

National data indicate that:

Males become sexually active at an earlier age than females.³⁵

"Currently sexually active" teens were significantly more likely to be:

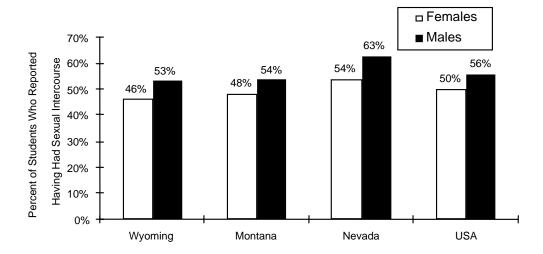
- Students enrolled in grade 12 than students in grades 9 through 11. 35
- African American male and female students (65.1% and 53.2%, respectively) 35
- 40.7% of Hispanic male and 37.95 of Hispanic male students were sexually active³⁵
- Only 32.9% of white male and 35.2% of White female students were sexually active³⁷
- A 1992 national survey of adult sexual behavior reported that 25% of women said they were forced into unwanted sexual behaviors at some time. Two percent of men surveyed reported being forced into sexual activity.³⁵

Studies conducted in other states found:

- Studies report that about 60% of pregnant teens were sexual victims through molestation, rape or attempted rape before they became pregnant.^{4, 37, 38}
- Pregnant adolescents report being sexual victims at about twice the proportion of all young women.
 An estimated 25% of young women under 18 years of age in the general population report sexual abuse.³⁹
- Pregnant or parenting teens who reported sexual abuse were significantly younger (13.2 years) at their first sexual intercourse compared with teens who had not been abused (14.5 years).³⁷

Figure 22

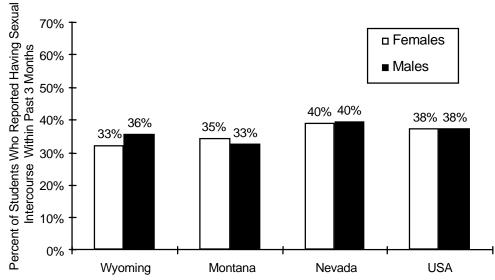
Percent of High School Students in Selected Intermountain States and U.S. Who Reported Having Had Sexual Intercourse: 1993



CDC's MMWR, Youth Risk Behavior Surveillance Survey - US 1993 Utah excludes questions related to sexuality.

Figure 23

Percent of High School Students in Selected States and U.S. Who Are Currently Sexually Active: 1993



CDC's MMWR, Youth Risk Behavior Surveillance Survey - US 1993 Utah excludes questions related to teenagers' sexuality.

Contraceptive Use/Intentions

According to current state law, parents in Utah must give permission in writing before their unmarried children under 18 years of age may receive information about or services for family planning from a state-funded agency.

More Utah teens are using family planning services than in the past. The rate of reported pregnancies in female Utahns 15-19 years of age declined 35% between 1980 and 1997. About 51 teens per 1,000 adolescent women became pregnant in 1997 compared with 78 per 1,000 in 1980.¹

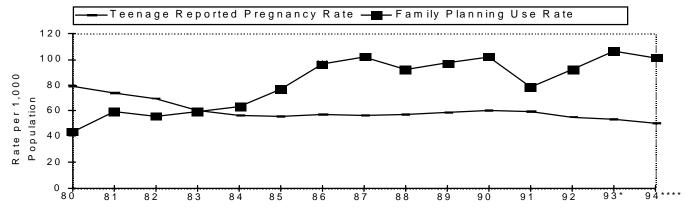
- The data in Figure 24 show an increased use of family planning services among Utah teens since 1980. Most of the decline in reported teen pregnancy rates came in the early 1980s. 1,40
- In 1980, there were at least 12 publicly-funded family planning sites in Utah's metropolitan areas. In 1995, there were 44 sites across the state representing 266% growth over 15 years.⁹
- In 1997, 36% of Utahns 15-19 years of age who had abortions did not use contraceptives during the previous year.¹
- Medicaid only pays for contraception for very poor women. Women eligible for Medicaid-funded prenatal care under the Baby Your Baby program are not eligible for ongoing Medicaid services, including family planning care.⁹
- Few teen pregnancy prevention programs target males; those that have involved males showed no impact on contraceptive usage.⁹

Research studies in other states show that:

- On average, adolescents delay seeking contraceptive services for nearly one year after becoming sexually active.⁴¹
- Most unintended pregnancies (71%) occurred among teens who were not using contraception when they became pregnant in 1987. 42, 43
- Births to unmarried adolescent girls were unintended 84% of the time in 1990. 42,43
- Publicly funded family planning services prevent an average of 1.2 million unintended pregnancies, including 509,000 unintended births and 516,000 additional abortions, each year in the United States.⁴¹

Figure 24

Rates of Reported Pregnancies* and Family Planning Utilization Rates** for Females 15-19 Years of Age: Utah 1980-1994***



*The rate of reported pregnancies is the number of live births plus the number of induced abortions per 1,000 female population aged 15-19. This rate probably underestimates total pregnancies since it excludes unreported miscarriages which are estimated to be 13-15% of all pregnancies. *The family planning use rate is the number of individuals (unduplicated head count) who visited a Planned Parenthood clinic during a calendar year per 1,000 female population aged 15-19.***1993 and 1994 data are provisional. Utah Dept. of Health, Bureau of Vital Records provided pregnancy rates. Planned Parenthood Association

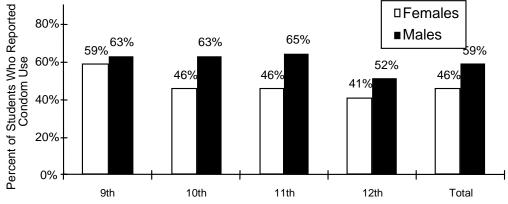
Sexually Transmitted Diseases

In addition to the risk of pregnancy, sexually active teens risk acquiring several sexually transmitted diseases. Of particular concern are gonorrhea and chlamydia infections. These two infections are often asymptomatic in women, but if untreated they can progress to pelvic inflammatory disease (PID). PID results in scarring of the uterus and tubes that can leave women unable to become pregnant, can greatly increase the risk of an ectopic pregnancy, or can cause chronic pain that may require surgery, such as hysterectomy.

- By the end of high school, most young women in the United States report being currently sexually active.
- Less than half of female adolescents report using condoms so their risk of contracting sexually transmitted diseases (STDs) is high.³⁵
- Based on reported incidence of gonorrhea, Utah rates are substantially lower than for the United States.^{44,45}
- While national data are not available for comparison with the Utah chlamydia rates, other data suggest that Utah teens have risks similar to teens elsewhere in the United States for that infection.⁴⁴

Figure 25

Percent of High School Students Who Used a Condom at Last Sexual Intercourse by Grade Level: U.S.: 1993



CDC's MMWR, Youth Risk Behavior Surveillance Survey - US 1993. Utah excludes questions related to sexuality.

Table 2

Chlamydia Infection in Teenage Women Tested for Chlamydia in Family Planning Clinics and Upon Entrance to the Federal Job Corps Program

Family Planning Clinics

Women ages 15-19 July 1, 1994 through June 30, 1995

Utah Region VIII*	Number Tested	Percent Infected
	12,662	2.5%
	47,442	3.1%

Jobs Corps Entrance

Women ages 16-19

May 1990 through December 1994

	Number Tested	Percent Infected
Utah	775	11.2%
U.S.	47,442	14.1%

^{*}Region VIII (Health and Human Services) includes Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming. Utah Department of Health, Bureau of Surveillance and Analysis

- Rates of chlamydia have more than doubled for both sexes in Utah between 1988 and 1992. This increase is attributed greatly to improved screening and detection.^{44, 45}
- In addition to gonorrhea and chlamydia infections, teens who engage in unprotected sex risk getting HIV infection, the cause of AIDS, and human papilloma virus infection, a risk factor for cervical cancer.^{44,45}
- Since the latency period of the diagnosis of AIDS is five to ten years, a case diagnosed during a person's twenties may reflect unprotected sexual activity during the teen years. In 1993-94, there were two Utahns ages 15-19 and 43 Utahns ages 20-29 diagnosed with AIDS.^{44, 45}

NOTE: The State of Utah does not collect teen sexuality data through the Centers for Disease Control and Prevention questionnaire, Youth Risk Behavior Surveillence Survey.¹⁵

Adolescent Pregnancy Prevention Programs in Utah

Utah Public School Based Programs

Current Utah law (Article X, Section 3, Section 53A-17a-121) requires public schools to use "abstinence-based" curricula designed to prevent adolescent sexuality. Discussion of contraceptive methods requires written consent from parents or guardians for student participation. State Board policy prohibits teachers from advocating or encouraging use of contraception. The curricula should involve parents or guardians of participating students in a substantial and consistent manner and comply with other requirements. More than half (60% or 24 of 40) of Utah school districts will receive at-risk pregnancy prevention state funds during the 1999-2000 school year to teaching a health curriculum unit that focuses on sexual abstinence. In 1998, more than 63,000 youth were enrolled in these programs.

Five of the teen pregnancy prevention programs used in Utah schools through State Office of Education funding have had an independent review by Child Trends, Inc. of Washington D.C. These programs are Postponing Sexual Involvement (PSI),^{46,47} Reducing the Risk,⁴⁷ Sex Respect,⁴⁷ Teen Aid,^{49,50} and Values and Choices.⁴⁸ The programs, PSI and Reducing the Risk, have shown a moderate impact in the direction of delaying sexual initiation and on reducing adolescent fertility rates. Sex Respect,⁵¹ Teen Aid^{46,50} and Values and Choices ⁵² did note a difference in behavioral attitudes from pretest to posttest, but did not look at the impact on actual behavior.

Another program used in Utah schools, the Community of Caring program, emphasizes planning for the future and values such as respect, responsibility, trust, and caring. Evaluations done in other states found no significant differences in teens' sexual activity before they participated in this program compared with after the program.⁵³

Utah Non-School Based Programs

In 1996 federal law was enacted that provided \$50 million per year over a five year period for states to implement abstinence-only education programs to reduce out-of-wedlock and teen pregnancies. Utah was the recipient of \$325,666 for five years beginning in 1997. These monies are used to fund 11 abstinence-only projects in various areas of the state that target 9-14 year old youth. The projects are administered by local health departments, school districts and private not-for-profit organizations. The federal requirements for use of these funds prohibit any discussion of contraception. Each project is required to adhere to the federal definition of abstinence education, develop a parent component, and an evaluation component. Each project is utilizing a different strategy, some using standard curricula, such as Sex Can Wait, some developing their own curricula, and others utilizing a multi-focused approach to promote abstinence.⁹

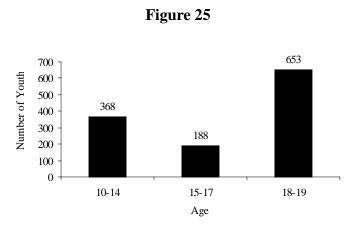
Ten of Utah's twelve local health departments provide family planning services to unmarried teens with written parental consent. In addition, Planned Parenthood Association of Utah provides trained teens (supervised by adult clinicians) to counsel peers visiting a family planning clinic in West Valley City. Teen staff give information about sexual responsibility and family planning to clients. Staff members also visit with patrons at teen nightclubs to provide information about sexually transmitted diseases and pregnancy prevention. During fiscal years 1998 and 1999 (July 1, 1997-July1, 1999), 13,700 teens received contraceptive services, family planning information and instruction on how to prevent sexually transmitted diseases and HIV from Planned Parenthood.⁴⁰

Evaluations of service-based programs that target teen pregnancy indicate that the best results for contraceptive use are obtained through an initial visit that extends over two clinic visits, staff training in adolescent development, and provision of more consistent and intensive follow-up regarding return visits.⁵

The YWCA's Peer Approach Counseling by Teens (PACT) program teaches teens problem-solving, access to community health and human services, abusive versus healthy relationships, pregnancy, contraception, sexually transmitted diseases information and clarifies personal values.

The literature has shown that one of the strongest predictors for early sexual initiation and adolescent parenthood is school failure.⁵ The programs that had the greatest impact on teen pregnancy were initiated at a very young age, one at the preschool level.⁵⁹ The data indicate that students in junior high or middle school who are failing in school are already at risk for initiating sex.²¹

Concern about the high rate of repeat pregnancies has led to the development of several community-based programs, such as the University's Teen Mother and Child Program, and Salt Lake City/County's Teens N'Tots Program. Both programs strive to reduce subsequent pregnancies among teen mothers, encouraging educational attainment, employment, and strong parenting skills. A Child Trends, Inc. independent review found that few of the programs designed to prevent subsequent pregnancies had an impact, at least in the initial years. Given the results of these evaluated programs it may be that extraordinary approaches are needed for the population of teen mothers who have subsequent pregnancies.⁵



Utah Department of Health, Division of Community and Family Health Services, Maternal and Child Health Block Grant Services Report from Local Health Departments.

Bibliography

- 1. Utah Department of Health, Bureau of Vital Records.
- 2. CDC "Births: Final Data for 1997" National Vital Statistics Reports Vol. 47. No18. April 29, 1999.
- 3. State of Utah. Preventing Teenage Pregnancy in Utah. Governor's Task Force on Teenage Pregnancy Prevention. November 1988.
- 4. The Alan Guttmacher Institute. "Teenage Pregnancy and the Welfare Reform Debate." Issues in Brief. February 1995.
- 5. Moore, KA, Sugland, BW, Blumenthal, C, Glei, DA, Snyder, MA. Adolescent Pregnancy Prevention Programs: Interventions and Evaluations. Report to the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services. Washington, D.C. Child Trends, Inc. June 1995.
- 6. Utah Department of Health. MatCHIIM Database. Available: http://hlunix.hl.state.ut.us/matchiim/main/ U.S. Census Bureau. State Population Estimates. Available: http://www.census.gov/population/www/estimates/statepop.html
- 7. Males, M, Chew, K.S.Y. "Adult Fathers in School-Age Childbearing." University of California at Irvine. Paper presented at Population Association of America professional meeting in San Francisco. April 1995.
- 8. Darroch, JE, Landry, DJ, Oslak, S. "Age Differences Between Sexual Partners in the United States." Family Planning Perspectives 31 No. 4.
- 9. Streeter, Nan. Program Manager, Reproductive Health. Utah Department of Health. Personal correspondence. 1995.
- 10. Fraser, AM, Brockert, JE, Ward, RH. "Association of Young Maternal Age with Adverse Reproductive Outcomes." The New England Journal of Medicine 332 No. 17: 1113-1117. April 27, 1995.
- 11. Utah Department of Health. Office of Health Data Analysis. Hospital Discharge Database. Available: http://hlunix.hl.state.ut.us/hda/hi iq/hi iq.html?
- 12. NCHS. Health of Our Nation's Children. National Health Interview Survey on Child Health 1988. Series 10 No. 191. December 1994.
- 13. Utah Department of Health. Bureau of Vital Records. Utah Birth and Death Certificates Data base.

- 14. U.S. Bureau of the Census. Department of Commerce. Economics and Statistics Administration. "Statistical Brief: Mothers Who Receive AFDC Payments Fertility and Socioeconomic Characteristics." Survey of Income and Program Participation (SIPP) conducted between June and September 1993. Issued March 1995.
- 15. Moore, KA, Sugland, BW, Blumenthal, C, Glei, DA, Snyder, MA. Adolescent Pregnancy Prevention Programs: Interventions and Evaluations. Report to the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services. Washington, D.C. Child Trends, Inc. June 1995.
- 16. U.S. Bureau of the Census. Department of Commerce. Economics and Statistics Administration. Statistical Abstract of the United States 1994. 114th Edition. September 1994.
- 17. Utah Department of Health. Bureau of Vital Records. Adolescent Marriage and Divorce: Utah and the United States 1970-1990. Technical Report No. 177. July 13, 1994.
- 18. Hill, MA and O'Neill, J. Underclass Behaviors in the United States: Measurement and Analysis of Determinants. New York: Center for the Study of Business and Government, Baruch College, The City University of New York. 1993.
- 19. Kahn, JR and Anderson, KE. "Intergenerational Patterns of Teenage Fertility." Demography. 29 (1): 39-57. 1992.
- 20. McLaughlin, S and Sandefur, G. Growing Up With a Single Parent: What Hurts, What Helps. Cambridge, MA: Harvard University Press. 1994.
- 21. Moore, KA, Glei, DA, Morrison, DR, and Manlove, J. "Non-Marial Childbearing: Family, Peer, and School Influences." Unpublished manuscript. Washington, D.C. Child Trends, Inc. 1995.
- 22. Manlove, J. The Social Reproduction of Teenage Motherhood in Great Britain. Unpublished doctoral dissertation. Durham, NC: Duke University. 1993.
- 23. Manlove, J. "Breaking the Cycle of the Disadvantaged: Ties Between Educational Attainments, Dropping Out and Teenage Motherhood." Paper presented at annual meeting of the American Education Research Association. 1995.
- 24. Ku, L, Sonenstein, FL, and Pleck, JH. "Neighborhood, Family and Work: Influences on the Premarital Behaviors of Adolescent Males." Social Forces. 72:479-503. 1993.
- 25. Forrest, JD. "Timing of Reproductive Life Stages." Obstetrics and Gynecology. 82(1): 105-111. 1993.
- 26. Nangle, BE. Program Manager, Data Resources. Utah Department of Health. Personal correspondence. 1995.

- 27. Adamec, CA, Pierce, WL. The Encyclopedia of Adoption. Facts on File, Inc. New York. 1991.
- 28. NCHS. National Survey of Family Growth 1988.
- 29. McLaughlin SD and Johnson. The Relationship of Client and Project Characteristics to the Relinquishment Rate of AFL Care Demonstration Projects. Final report to Office of Population Affairs. Seattle: WA: Battelle Human Affairs Research Centers. 1992.
- 30. Sugland, BW. "Disparity Between Educational Aspirations and Educational Expectations and the Effect on Early Childbearing: Executive Summary." Unpublished dissertation. Baltimore, MD: Johns Hopkins University. 1992.
- 31. Zabin, LS. "Adolescent Pregnancy: The Clinician's Role in Intervention." Journal of General Internal Medicine. 5:S81-S88. 1990.
- 32. Bishop, M. Analyst. Utah Department of Human Services. Division of Human Services Administration. Personal correspondence. 1995.
- 33. Christopherson, CR, Miller, BC, and Norton MC. "Pubertal Development, Parent-Teen Communication, and Sexual Values as Predictors of Adolescent Sexual Initiations and Behaviors." Paper presented at the Society for Research on Adolescence. February 1994.
- 34. Szykula, Gail. Director, Teen Mother and Child Program, University of Utah Health sciences. Personal correspondence. 1995.
- 35. Centers for Disease Control and Prevention (CDC). Surveillance Summaries. "Youth Risk Behavior Surveillance United States, 1993." Morbidity and Mortality Weekly Report. 44. No. SS-1. March 24, 1995.
- 36. Lacy, L. Administrator. Utah Office of Education. Personal Interview. 1995.
- 37. Boyer, D and Fine, D. "Sexual Abuse as a Factor in Adolescent Pregnancy and Child Maltreatment." Family Planning Perspectives. 24:4-11. 1992.
- 38. Moore, KA, Nord, CW and Peterson, JL. "Nonvoluntary Sexual Activity Among Adolescents." Family Planning Perspectives. 21:110-114. 1989.
- 39. Schumacher, Catherine. Director, 1/95-7/95, Utah Office of Public Health Data, Utah Department of Health. Personal correspondence. 1995.
- 40. Planned Parenthood Association of Utah.

- 41. Steven-Simon, C. "Preventing Adolescent Pregnancy." University of Colorado-Denver Medical College. Presentation given during Grand Rounds at Primary Children's Medical Center. Salt Lake City. April 6, 1995.
- 42. Moore, KA, Miller, B, Sugland, BW, Morrison, DR, Glei, DA, and Blumenthal, C. Beginning Too Soon: Adolescent Sexual Behavior, Pregnancy, and Parenthood. Executive Summary Report to the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services. Washington, D.C. Child Trends, Inc. June 1995.
- 43. Child Trends, Inc. "Facts At a Glance." Washington, D.C. February, 1995.
- 44. Rolfs, Robert. Director, 8/95-present, Utah Office of Public Health Data, Utah Department of Health. Personal correspondence. 1995.
- 45. Schumacher, Catherine. Director, 1/95-7/95, Utah Office of Public Health Data, Utah Department of Health. Personal correspondence. 1995.
- 46. Howard M and McCabe, JB. "An Information and Skills Approach for Younger Teens: Postponing Sexual Involvement Program." In Miller, BC, Card, JJ, Paikoff, RL, and Peterson J (Eds.) Preventing Adolescent Pregnancy. Newbury Park, CA. Sage Publications. 1992.
- 47. Howard M and McCabe, JB. "Helping Teenagers Postpone Sexual Involvement." Family Planning Perspectives. 22:21-26. 1990.
- 48. Donahue, M.J. Technical Report of the National Demonstration Project Field Test of Human Sexuality: Values and Choices. Minneapolis, MN: Search Institute. 1987.
- 49. Weed, SE. Predicting and Changing Teen Sexual Activity Rates: A Comparison of Three Title XX Programs. The Institute for Research and Evaluation. March 1992.
- 50. Weed, SE, DeGaston, J, Prigmore, J, and Tanas, R. The Teen-Aid Family Life Education Project: Fourth Year Evaluation Report. Salt Lake City, UT. Institute for Research and Evaluation: 1991.
- 51. Olsen, JA, Weed, SE, Ritz, GM, and Jensen, LC. "The Effects of Three Abstinence Sex Education Programs on Student Attitudes Toward Sexual Activity." Adolescence 26(103) 631-641. 1991.
- 52. Cocozzelli, C. "Predicting the Decision of Biological Mothers to Retain or Relinquish Their Babies for Adoption." Child Welfare. 63:33-44.January/February 1989.
- 53. Miller, BC, Dyk, PH. "Community of Caring Effects on Adolescent Mothers: A Program Evaluaton." Family Relations. 40:386-395. 1991.
- 54. Weikart, DP. Quality Preschool Programs: A Long-Term Social Investment. New York, NY. Ford Foundation. 1989.